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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :  
DAYNA M. DECKER : EXAMINER: PRICE, CARL D.  
SERIAL NO: 10/759,508 :  
FILED: JANUARY 15, 2004 : GROUP ART UNIT: 3749  
FOR: CANDLE HAVING A PLANAR :  
WICK AND METHOD OF AND  
EQUIPMENT FOR MAKING SAME

DECLARATION UNDER 37 C.F.R. §1.132

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

I, Dayna DECKER, hereby declare:

1. I am the sole inventor of the above-captioned patent application.
2. I am a principal of Lumetique, Inc., the assignee of the above-captioned patent application.
3. I am familiar with the references cited against the above-captioned patent application in the March 6, 2008 Office Action. I have worked with the products and methods such as those described in the above-captioned patent application and the cited references.
4. I and/or those under my direct supervision carried out the following experimentation.
  - a. Wicks were prepared from various woods having various properties and dimensions, as described in the TABLES A-P below. For each wick, a body of meltable fuel

including paraffin and 10% fragrance was prepared in a glass jar having a diameter of 3 inches. Each wick was provided in a respective glass so that the wick extended 0.125 to 0.375 inches above the top surface of the body of meltable fuel. The resulting candles were observed, while burning for up to 6 hours.

- b. The results of the observation are set forth in the TABLES A-P below.

TABLE A

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Aspen	Low-Med	15	Figured	0.375	0.019	Self-Extinguished
Aspen	Low-Med	15	Figured	0.375	0.021	Self-Extinguished
Aspen	Low-Med	15	Figured	0.375	0.023	Self-Extinguished
Aspen	Low-Med	15	Figured	0.375	0.025	Self-Extinguished
Aspen	Low-Med	15	Figured	0.375	0.027	Self-Extinguished
Aspen	Low-Med	15	Figured	0.375	0.029	Self-Extinguished

TABLE B

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Satin-wood	None-Low	3	Straight	0.375	0.019	Self-Extinguished
Satin-wood	None-Low	3	Straight	0.375	0.021	Self-Extinguished
Satin-wood	None-Low	3	Straight	0.375	0.023	Self-Extinguished
Satin-wood	None-Low	3	Straight	0.375	0.025	Inconsistent Flashing Flame, Sputtering Noise
Satin-wood	None-Low	3	Straight	0.375	0.027	Inconsistent Flashing Flame,

						Sputtering Noise
Satin-wood	None-Low	3	Straight	0.375	0.029	Inconsistent Flashing Flame, Sputtering Noise

TABLE C

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Cypress	Med-High	10	Spiral	0.375	0.019	Self-Extinguished
Cypress	Med-High	10	Spiral	0.375	0.021	Self-Extinguished
Cypress	Med-High	10	Spiral	0.375	0.023	Self-Extinguished
Cypress	Med-High	10	Spiral	0.375	0.025	Self-Extinguished
Cypress	Med-High	10	Spiral	0.375	0.027	Self-Extinguished
Cypress	Med-High	10	Spiral	0.375	0.029	Very Low Flame, then Self-Extinguished

TABLE D

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Bamboo	None-Low	15	Straight/ Figured	0.375	0.019	Does Not Light
Bamboo	None-Low	15	Straight/ Figured	0.375	0.021	Does Not Light
Bamboo	None-Low	15	Straight/ Figured	0.375	0.023	Does Not Light
Bamboo	None-Low	15	Straight/ Figured	0.375	0.025	Does Not Light
Bamboo	None-Low	15	Straight/ Figured	0.375	0.027	Does Not Light
Bamboo	None-Low	15	Straight/ Figured	0.375	0.029	Does Not Light

TABLE E

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Maple	None-Low	5	Cross	0.375	0.019	Very Low Flame
Maple	None-Low	5	Cross	0.375	0.021	Very Low Flame
Maple	None-Low	5	Cross	0.375	0.023	Very Low Flame
Maple	None-Low	5	Cross	0.375	0.025	Very Low Flame
Maple	None-Low	5	Cross	0.375	0.027	Very Low Flame
Maple	None-Low	5	Cross	0.375	0.029	Flame Too High

TABLE F

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Wenge	None	2	Straight	0.375	0.019	Self-Extinguished
Wenge	None	2	Straight	0.375	0.021	Self-Extinguished
Wenge	None	2	Straight	0.375	0.023	Self-Extinguished
Wenge	None	2	Straight	0.375	0.025	Self-Extinguished
Wenge	None	2	Straight	0.375	0.027	Self-Extinguished
Wenge	None	2	Straight	0.375	0.029	Self-Extinguished

TABLE G

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Cherry	Med-High	6	Straight	0.375	0.019	Self-Extinguished
Cherry	Med-High	6	Straight	0.375	0.021	Self-Extinguished

Cherry	Med-High	6	Straight	0.375	0.023	Low Flame, Good Crackling Sound
Cherry	Med-High	6	Straight	0.375	0.025	Good Flame, Good Crackling Sound
Cherry	Med-High	6	Straight	0.375	0.027	Good Flame, Good Crackling Sound
Cherry	Med-High	6	Straight	0.375	0.029	High Flame
Cherry	Med-High	6	Straight	0.375	0.031	High Flame
Cherry	Med-High	6	Straight	0.375	0.033	High Flame
Cherry	Med-High	6	Straight	0.375	0.035	High Flame

TABLE H

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Oak	Low-Med	12	Figured	0.375	0.019	Does Not Light
Oak	Low-Med	12	Figured	0.375	0.021	Does Not Light
Oak	Low-Med	12	Figured	0.375	0.023	Does Not Light
Oak	Low-Med	12	Figured	0.375	0.025	Does Not Light
Oak	Low-Med	12	Figured	0.375	0.027	Does Not Light
Oak	Low-Med	12	Figured	0.375	0.029	Very Low Flame

TABLE I

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Rosewood	Low	4	Burled	0.375	0.019	Does Not Light
Rosewood	Low	4	Burled	0.375	0.021	Does Not Light
Rosewood	Low	4	Burled	0.375	0.023	Does Not

						Light
Rosewood	Low	4	Burled	0.375	0.025	Medium Flame, Smoke, Sputtering Noise
Rosewood	Low	4	Burled	0.375	0.027	Medium Flame, Smoke, Sputtering Noise
Rosewood	Low	4	Burled	0.375	0.029	Medium Flame, Smoke, Sputtering Noise

TABLE J

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Cedar	Med-High	12	Straight	0.375	0.019	Does Not Light
Cedar	Med-High	12	Straight	0.375	0.021	Does Not Light
Cedar	Med-High	12	Straight	0.375	0.023	Self-Extinguished
Cedar	Med-High	12	Straight	0.375	0.025	Self-Extinguished
Cedar	Med-High	12	Straight	0.375	0.027	Low Flame
Cedar	Med-High	12	Straight	0.375	0.029	Self-Extinguished

TABLE K

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Poplar	Low	7	Straight	0.375	0.019	No Flame
Poplar	Low	7	Straight	0.375	0.021	No Flame
Poplar	Low	7	Straight	0.375	0.023	Low Flame
Poplar	Low	7	Straight	0.375	0.025	Low Flame, Crackling

						Sound
Poplar	Low	7	Straight	0.375	0.027	Good Flame, Good Crackling Sound
Poplar	Low	7	Straight	0.375	0.029	Good Flame, Good Crackling Sound
Poplar	Low	7	Straight	0.375	0.031	Smoke
Poplar	Low	7	Straight	0.375	0.033	Smoke

TABLE L

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Elm	Low-Med	12	Interlocked	0.375	0.019	Self-Extinguished
Elm	Low-Med	12	Interlocked	0.375	0.021	Self-Extinguished
Elm	Low-Med	12	Interlocked	0.375	0.023	Self-Extinguished
Elm	Low-Med	12	Interlocked	0.375	0.025	Self-Extinguished
Elm	Low-Med	12	Interlocked	0.375	0.027	Self-Extinguished
Elm	Low-Med	12	Interlocked	0.375	0.029	Self-Extinguished

TABLE M

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Beech	None-Low	10	Cross	0.375	0.019	No Flame
Beech	None-Low	10	Cross	0.375	0.021	No Flame
Beech	None-Low	10	Cross	0.375	0.023	No Flame
Beech	None-Low	10	Cross	0.375	0.025	Low Flame
Beech	None-Low	10	Cross	0.375	0.027	Self-Extinguished
Beech	None-Low	10	Cross	0.375	0.029	Self-Extinguished

TABLE N

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Birch	Low	15	Figured Burl	0.375	0.019	No Flame
Birch	Low	15	Figured Burl	0.375	0.021	No Flame
Birch	Low	15	Figured Burl	0.375	0.023	No Flame
Birch	Low	15	Figured Burl	0.375	0.025	No Flame
Birch	Low	15	Figured Burl	0.375	0.027	No Flame
Birch	Low	15	Figured Burl	0.375	0.029	No Flame

TABLE O

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Zebrano	Low	10	Spiral Figured	0.375	0.019	Self-Extinguished
Zebrano	Low	10	Spiral Figured	0.375	0.021	Self-Extinguished
Zebrano	Low	10	Spiral Figured	0.375	0.023	Self-Extinguished
Zebrano	Low	10	Spiral Figured	0.375	0.025	Self-Extinguished
Zebrano	Low	10	Spiral Figured	0.375	0.027	Self-Extinguished
Zebrano	Low	10	Spiral Figured	0.375	0.029	Self-Extinguished



TABLE P

Wood Type	Resin Content	Moisture Content (%)	Grain Configuration	Wick Width (inches)	Wick Thickness (inches)	Observations
Lacewood	Low	5	Tight Burl	0.375	0.019	No Flame
Lacewood	Low	5	Tight Burl	0.375	0.021	No Flame
Lacewood	Low	5	Tight Burl	0.375	0.023	No Flame
Lacewood	Low	5	Tight Burl	0.375	0.025	No Flame
Lacewood	Low	5	Tight Burl	0.375	0.027	No Flame
Lacewood	Low	5	Tight Burl	0.375	0.029	No Flame

5. As is evident from the observations in TABLES A-P above, candles including wicks formed from poplar or cherry, as in claim 159 of the above-captioned patent application, candles including wicks formed from wood having substantially straight grains aligned substantially in the height dimension and a moisture content of from 6 to 8 percent, as in claim 179, and candles including wicks having thicknesses of from 0.023 to 0.028 inches, as in claim 199, provide unexpected, superior burning properties (Good Flame, Good Crackling Sound) relative to candles including wicks that do not possess such features. These results are objective evidence of the improvements of the candles or candle apparatus of claims 159, 179 and 199 over candles as in SE 9903818 to Ebeling ("Ebeling") (cited in the outstanding Office Action in the above-captioned patent application) and thus these results rebut any suggestion that it would have been obvious to modify the candles of Ebeling in view of the teachings of the other cited references.

Application No. 10/759,508  
Declaration Under 37 C.F.R. §1.132

6. All statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true; these statements were made with the knowledge that willful false statements are punishable by fine and/or imprisonment under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing therefrom.

Date:

9-5-08  
Dayna DECKER